



Central City/Clear Creek (OU4 and Gilpin Mill)

Idaho Springs, Colorado

Site Description

The Central City/Clear Creek site is a 400-square-mile watershed that extends from the Continental Divide east to Denver, CO. Mining wastes were disposed of in Clear Creek contaminating it with zinc and cadmium. Clear Creek and its tributaries are used in whole or in part as a drinking water supply by several municipalities including Georgetown, Idaho Springs, Black Hawk, Golden, Westminster, Thornton, and Arvada. Clear Creek is also used for both agriculture and recreation.

Current Site Status and Cleanup Actions to Date

- In 1983, EPA placed the Central City/Clear Creek site on the National Priorities List (NPL).
- Colorado Department of Public Health and Environment (CDPHE) is the lead for the cleanup, with EPA working in collaboration.
- Casino developers in Central City and Black Hawk [capped](#) (2pp, 526K) or removed a number of mine waste piles as part of the cleanup.
- CDPHE completed a cleanup at the Argo Mill waste pile that included storm water controls and stream bank restoration.
- CDPHE constructed the Argo Water Treatment Facility treating acid mine drainage from the Argo Tunnel. It has been in operation since April 1998.
- Cleanup plans for the first two projects (known as Operable Units (OUs) 1 and 2), identified five discharging mine tunnels and the five tailings and mine waste piles associated with those tunnels for remedial action.
- The plan for the third cleanup project (OU3) modified the earlier decisions and identified six discharging mine tunnels and 17 tailings and waste piles for interim or final action. EPA will cleanup waste piles that range in size from 10,000 to 340,600 cubic yards.
- The plan for OU4 was created to investigate contamination associated with the North Clear Creek tributary to Clear Creek.
- EPA is amending the plans for OU3 and OU4 to add an on-site repository to consolidate waste rock and tailings piles, water treatment solids and metals-contaminated sediments.
- The cleanup plan included a voluntary program that tested water from private wells. Bottled water is provided free to those well owners who volunteered for testing and whose wells had contaminated water.
- During the summer of 2005, EPA constructed a cutoff wall and sediment basins and performed general storm water management maintenance to ensure that metals-laden surface and ground water was captured in the Virginia Canyon. This water is piped to the Argo Water Treatment Facility, which removes 40 to 100 pounds of metals everyday.
- During the summer of 2005, EPA began cleanup of the Chase Gulch #2

Key

Accomplishments

- Casino developers in Central City and Black Hawk have [capped](#) (2pp, 526K) or removed a number of mine waste piles as part of the cleanup.
- CDPHE completed a cleanup at the Argo Mill waste pile that included storm water controls and stream bank restoration.
- A voluntary program to test water from private wells resulted in bottled water being provided free to those well owners who volunteered for testing and whose wells had contaminated water.
- Pumping water from the Big 5 Tunnel drainage area since February 2006 has kept 100 pounds of metals from entering Clear Creek every day.

For more information on the projects at this site, please read the [Central City/Clear Creek Fact Sheet](#) on the Region 8 Superfund Web site.



mine waste rock pile. The design for cleanup included isolating the waste pile from the gulch flow and preventing slope erosion from surface flows.

- Beginning in November 2005, metals-laden water from the main stem of Clear Creek was treated with hydrated lime instead of sodium hydroxide. Using lime reduces the reagent costs by about 80 percent.
- In February 2006, EPA began pumping water from the Big 5 Tunnel drainage area to the Argo Water Treatment Facility. Keeping this water out of the Clear Creek removes about 60 pounds of metals load from the creek each day. This project was completed in cooperation with Colorado Department of Transportation, CDPHE, EPA and Idaho Springs.

Current Funding Status

- In 2006, OU04 received \$4.63 million in funding to cleanup sediments, sediments ponds, construct sediment controls in the North Clear Creek and tributary areas; on site repository acquisition; Quartz Hill Mine Waste Piles reclamation; and to construct treatment systems for water from the National Tunnel and Bates Hunter water treatment areas including associated pipelines.
- In 2006, the Golden Gilpin Mill site in Operable Unit 04 received \$300,000 in funding for reclamation work.